AMENDMENTS TO THE DRAWINGS

Applicant submits herewith one new drawing sheet (FIG. 4) showing a computer-readable medium. Adequate support for FIG. 4 is provided by *at least* paragraph 0018 and claim 8 of the original specification. No new matter has been added.

Applicant respectfully requests that the Examiner approve the new drawing sheet (FIG. 4).

Attachment: One (1) New Sheet (FIG. 4)

REMARKS

I. Status of Application

By the present Amendment, Applicant amends claim 8 and adds one new drawing sheet (FIG. 4), as set forth above. Claims 1 and 3-8 are all the claims pending in the Application, with claims 1 and 8 being in independent form. Claims 1 and 3-8 have been rejected.

The present Amendment addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Objections to the Drawings

The Examiner has objected to the drawings alleging that the feature of "a computer readable medium" must be shown in the drawings. Applicant submits herewith one new drawing sheet (FIG. 4) which shows the feature of a computer readable medium. Adequate support for FIG. 4 is provided by *at least* claim 8 and paragraph 0018 of the originally filed specification. No new matter has been added.

In view of the above, Applicant respectfully requests that the Examiner withdraw these objections.

III. Claim Rejections Under 35 U.S.C. §112

The Examiner has rejected claim 8 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. In particular, the grounds of rejection allege that the specification and drawings do not provide any specific detail to teach the feature of "a computer readable medium encoded with a computer program for generating a clock signal out of an electrical data signal" and how a computer readable medium encoded with a computer program generates a clock signal.

Without conceding the merits of the Examiner's rejection, Applicant has amended claim 8, as set forth above, to recite the feature of a computer-readable medium encoded with a computer program which causes a computer to generate a clock signal out of an electrical data signal that is received by a receiver. Accordingly, Applicant submits that the Examiner's previous rejections are now moot.

Indeed, the recitations of amended claim 8 are fully supported *at least* by claim 8 and paragraph 18 of the originally filed specification. Original claim 8 recited the feature of "[c]omputer software for generating a clock signal…" Further, paragraph 0018 of the original specification explicitly states "within the scope of the invention is a computer software for generating a clock signal out of an electrical data signal…"

The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.[1] Applicant submits that one reasonably skilled in the art could make or use a computer-readable medium encoded with a computer program which causes a computer to generate a clock signal out of an electrical data signal, as recited in claim 8, from *at least* claim 8 and paragraph 0018 of the original specification, coupled with information known in the art, without undue experimentation. Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection for *at least* the aforementioned reasons.

[1] United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). *See also*: Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916); In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988); and MPEP § 2164.01.

IV. Claim Rejections Under 35 U.S.C. §103

The Examiner has rejected claims 1 and 3-8 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0027692 to Uchiyama et al. (hereinafter "Uchiyama") in view of U.S. Patent No. 7,158,727 to Pathak et al. (hereinafter "Pathak"). Applicant respectfully traverses all of these rejections for *at least* the reasons set forth below.

In order for the Examiner to maintain a rejection under 35 U.S.C §103, the cited references must teach or suggest all of the recitations of claims 1 and 3-8. Applicant respectfully submits that Uchiyama, Pathak, and any combination thereof, fails to teach or suggest all the recitations of claims 1 and 3-8.

A. Independent Claim 1

For example, independent claim 1 recites (among other things):

> Receiver device… comprising:
> an opto-electrical conversion unit, which converts an optical signal, that is received from a source external to said receiver device, to a converted electrical data signal…
> a clock recovery unit comprising a phased locked loop circuit…

The grounds of rejection allege that Uchiyama's photo detector 31 and local optical pulse source 52 correspond to an opto-electrical conversion unit and a source external to said receiver device, respectively, as recited in claim 1. The grounds of rejection further allege that the phase-locked loop taught in Uchiyama corresponds to a clock recovery unit comprising a phased locked loop circuit, as claimed.

Applicant respectfully disagrees with the grounds of rejection. In order for the Examiner's allegations to hold true (i.e., that the phase-locked loop taught in Uchiyama

corresponds to a clock recovery unit comprising a phased locked loop circuit, as claimed) then Uchiyama's phase-locked loop must comprise the receiver device. This is because claim 1 expressly requires the feature of a receiver device comprising a clock recovery unit comprising a phased locked loop circuit.

Uchiyama explicitly teaches that "[t]he phase comparison part 40, the voltage-controlled oscillator 51, the local optical pulse source 52, the optical branching device 12 and the harmonic component local generation part 30 constitute a phase-locked loop PLL for the incoming signal component electrical signal." Paragraph 0053. Therefore, in order for the reasoning applied by the grounds of rejection to hold true (i.e., that Uchiyama's phase-locked loop corresponds to the claimed clock recovery unit comprising a phased locked loop circuit), Uchiyama's phase comparison part 40, voltage-controlled oscillator 51, local optical pulse source 52, optical branching device 12 and harmonic component local generation part 30 (i.e. , Uchiyama's phase-locked loop) must comprise the alleged receiver device. In particular, for the grounds of rejection to hold true, Uchiyama's local optical pulse source 52 must comprise the alleged receiver device.

However, if Uchiyama's local optical pulse source 52 comprises the alleged receiver device, then Uchiyama's local optical pulse source 52 cannot possibly correspond to a source external to said receiver device, as alleged by the grounds of rejection. Indeed, Uchiyama explicitly teaches the opposite of the allegations in the grounds of rejection. For example, Uchiyama teaches that the optical pulse source 52 is local and produces a locally generated optical pulse stream. *See e.g.,* paragraph 0063.

In short, the grounds of rejection rely on the allegation that the local optical pulse source 52 comprises a source external to said receiver device. However, Uchiyama explicitly teaches that the local optical pulse source 52 is local and constitutes the alleged phase-locked loop, which claim 1 requires to comprise the receiver device. Therefore, since the local optical pulse source 52 cannot possibly correspond to both a source external to said receiver device and also comprise a phase-locked loop which comprises the receiver device itself, the grounds of rejection fail for *at least* these reasons.

Independent claim 1 further recites:

> ...wherein the receiver device comprises a frequency filter for the spectral power of the electrical data signal...

The Examiner acknowledges that Uchiyama fails to teach or suggest the above features. Nevertheless, the Examiner alleges that it would have been obvious to replace the DEMUX 1204 of Uchiyama with the filtering demultiplexer of Pathak in order to extract the clock signal from the data signal. Applicant respectfully disagrees.

First, Uchiyama nowhere teaches or suggests a "DEMUX 1204." Thus, it would not have been obvious for a skilled artisan to replace Uchiyama's "DEMUX 1204" since Uchiyama fails to discloses the feature of a DEMUX 1204.

Second, the purported motivation relied upon by the grounds of rejection to modify the teachings of Uchiyama with those of Pathak is to extract the clock signal from the data signal. However, the grounds of rejection fail to provide the requisite factual support for this conlcusory

allegation.[2] In fact, the grounds of rejection do not provide any evidentiary support for this allegation whatsoever. Even under the recent KSR Int'l Co. v. Teleflex Inc. decision, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.[3]

Third, there would have been no reason for a skilled artisan to modify the teachings of Uchiyama with Pathak to extract the clock signal from the data signal, as alleged by the grounds of rejection. Quite to the contrary, Uchiyama already teaches the feature of extracting the clock signal from the data signal.[4] Consequently, there would have been no reason for a skilled artisan to look beyond the four corners of Uchiyama to achieve the end of extracting the clock signal from the data signal. Accordingly, the motivation relied upon by the grounds of rejection is unsupported by the cited references and claim 1 is patentable for *at least* these reasons.

Moreover, Applicant submits that claims 3-5 and 7 are allowable over the cited references *at least* by virtue of their dependency. Thus, Applicant respectfully requests that the Examiner withdraw these rejections.

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[2] It is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). This burden can only be satisfied by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. In re Lalu, 747 F.2d 703, 223 USPQ 1257 (Fed. Cir. 1984).

[3] KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727 (U.S. 2007).

[4] "To identify or distinguish respective bits of the received signal, it is necessary at the receiving end to extract from the received signal a clock corresponding to the timing fluctuation." Uchiyama, paragraph 0004.

B. Independent Claim 8

In view of the similarity between the requirements of claim 8 and the requirements discussed above with respect to independent claim 1, Applicant respectfully submits that arguments analogous to the foregoing arguments as to the patentability of independent claim 1 demonstrate the patentability of claim 8. As such, it is respectfully submitted that claim 8 is patentably distinguishable over the cited references *at least* for reasons analogous to those presented above. Thus, the allowance of this claim is respectfully solicited of the Examiner.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/ Andrew J. Taska /

Andrew J. Taska
Registration No. 54,666

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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